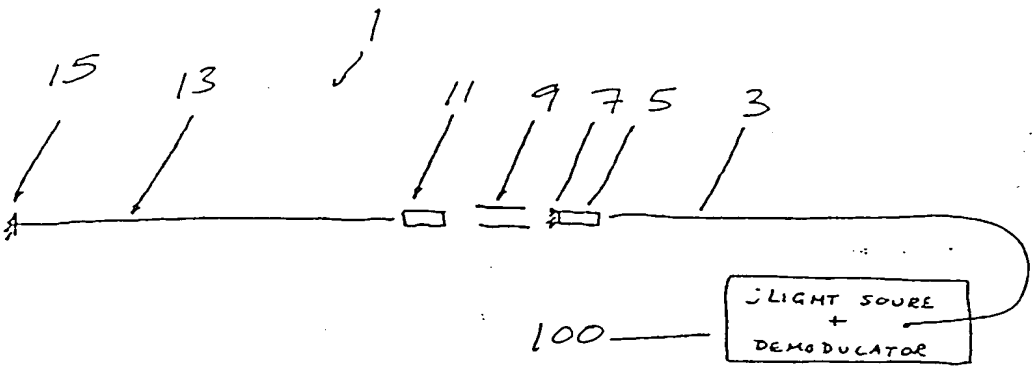


FIGURE 1A

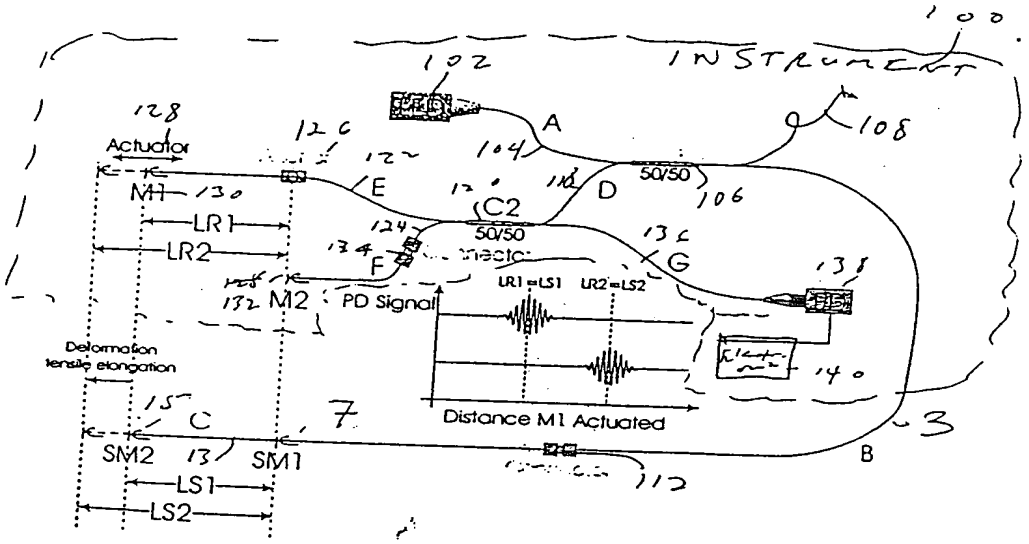

100
INSTRUMENT
102
108
A
104
50/50
106
D
C2
50/50
E
F
G
Actuator
M1
LR1
LR2
M2
PD Signal
LR1=LS1
LR2=LS2
Distance M1 Actuated
Deformation
tensile elongation
C
SM2
SM1
LS1
LS2
B
112
140

FIGURE 1 B

Figure 2

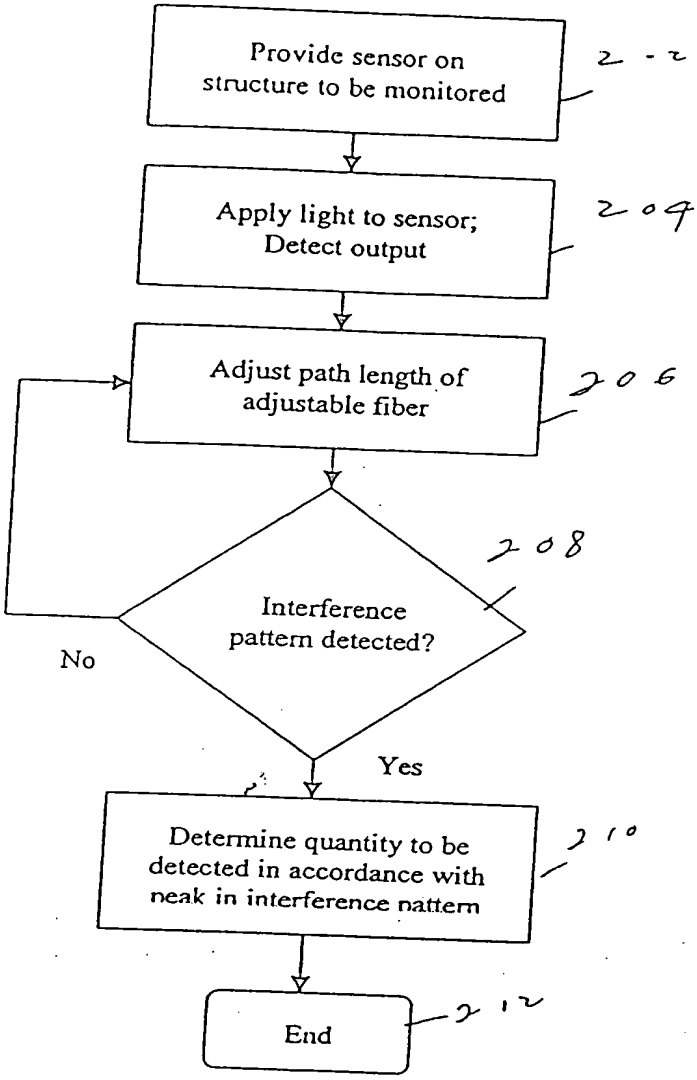

Provide sensor on structure to be monitored
202
Apply light to sensor; Detect output
204
Adjust path length of adjustable fiber
206
Interference pattern detected?
208
No
Yes
Determine quantity to be detected in accordance with peak in interference pattern
210
End
212

Fig. 3A

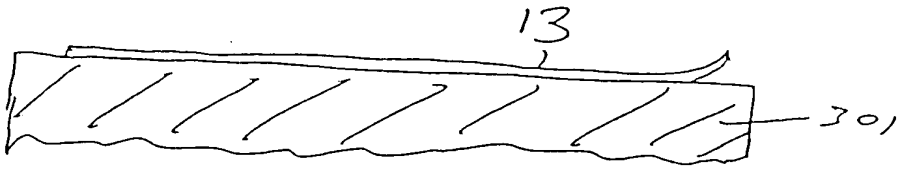


Fig. 3B

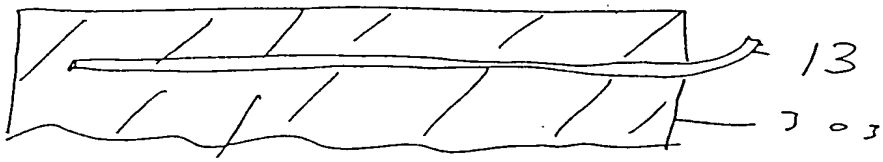


Fig. 3C

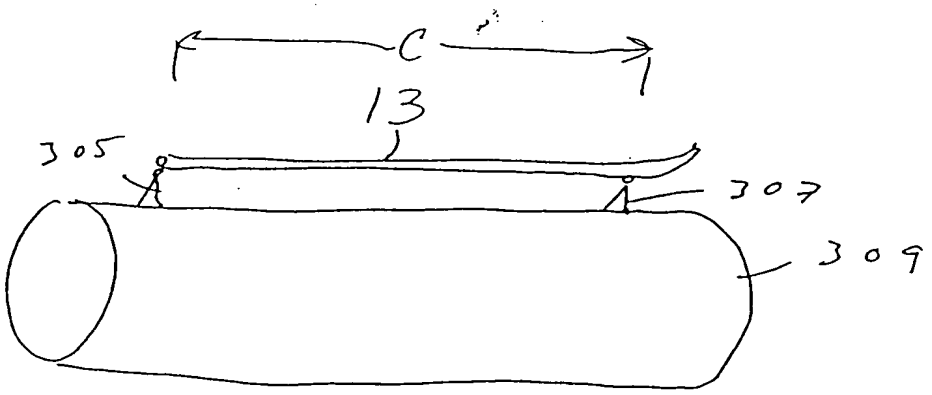


Fig. 4A

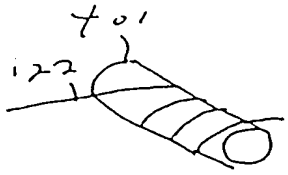


Fig. 4B

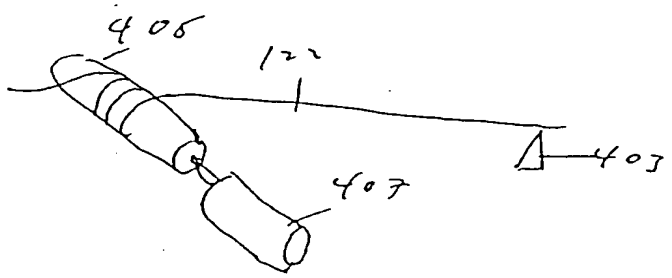


Fig. 5A

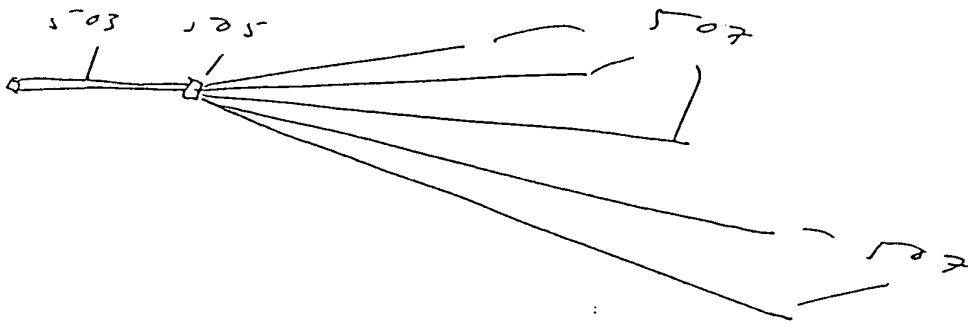
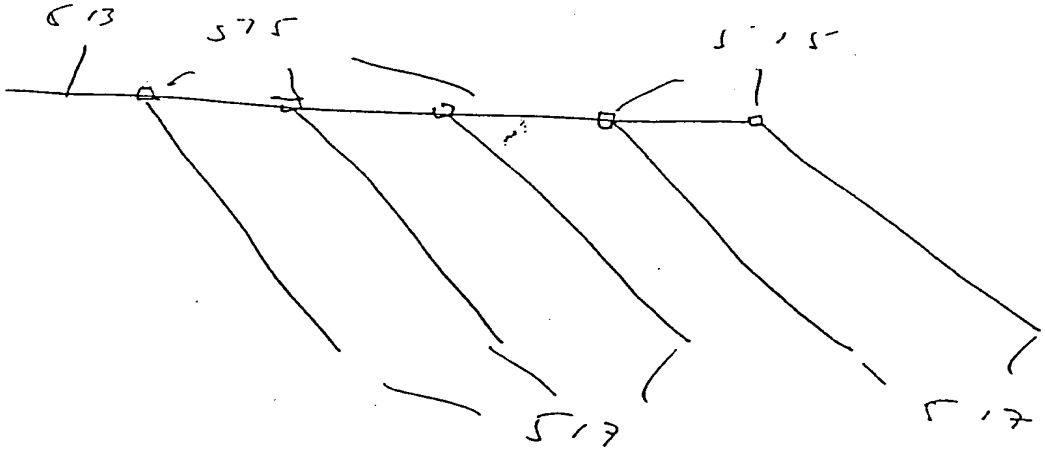


Fig. 5B



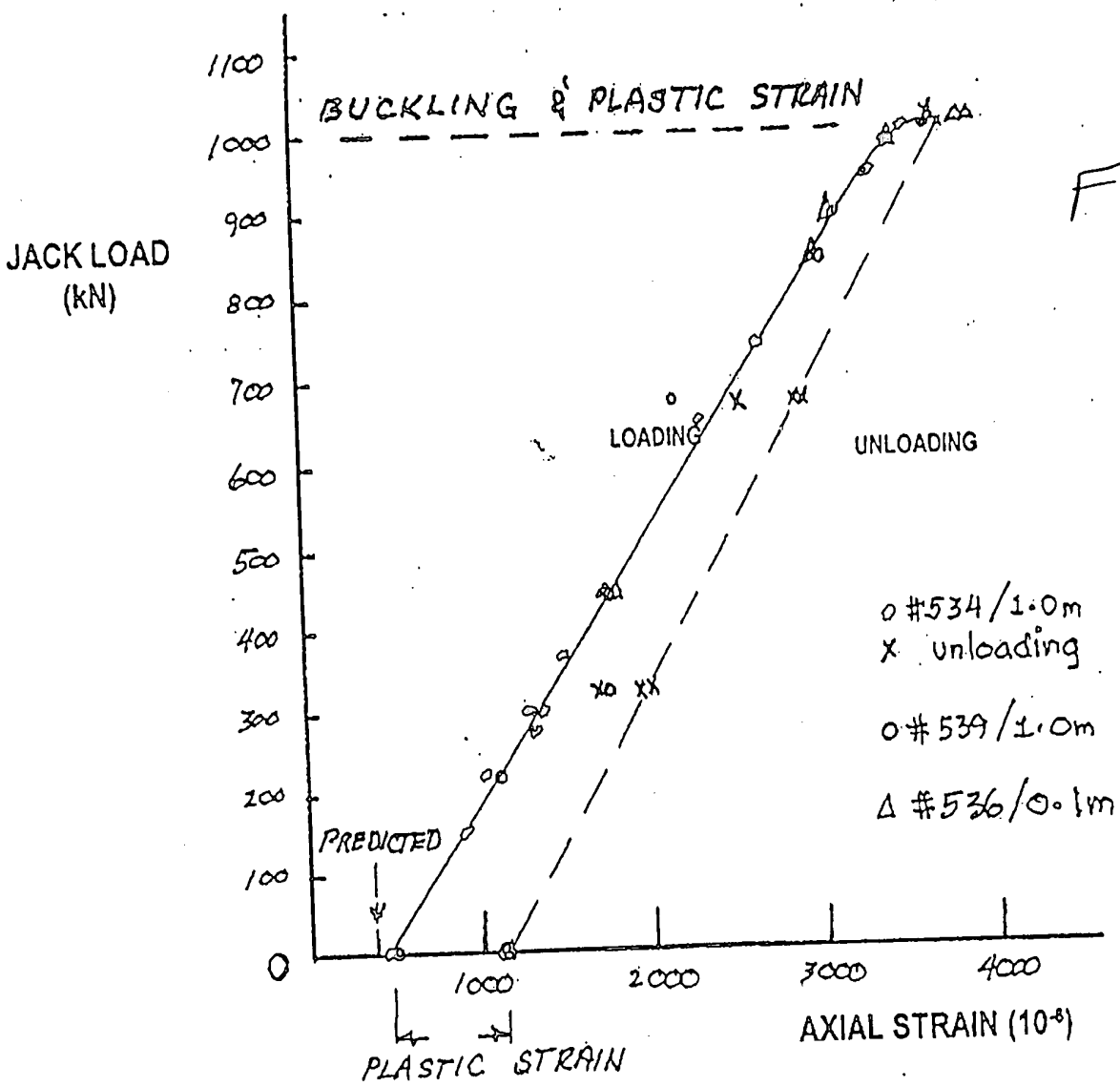


Fig. 6

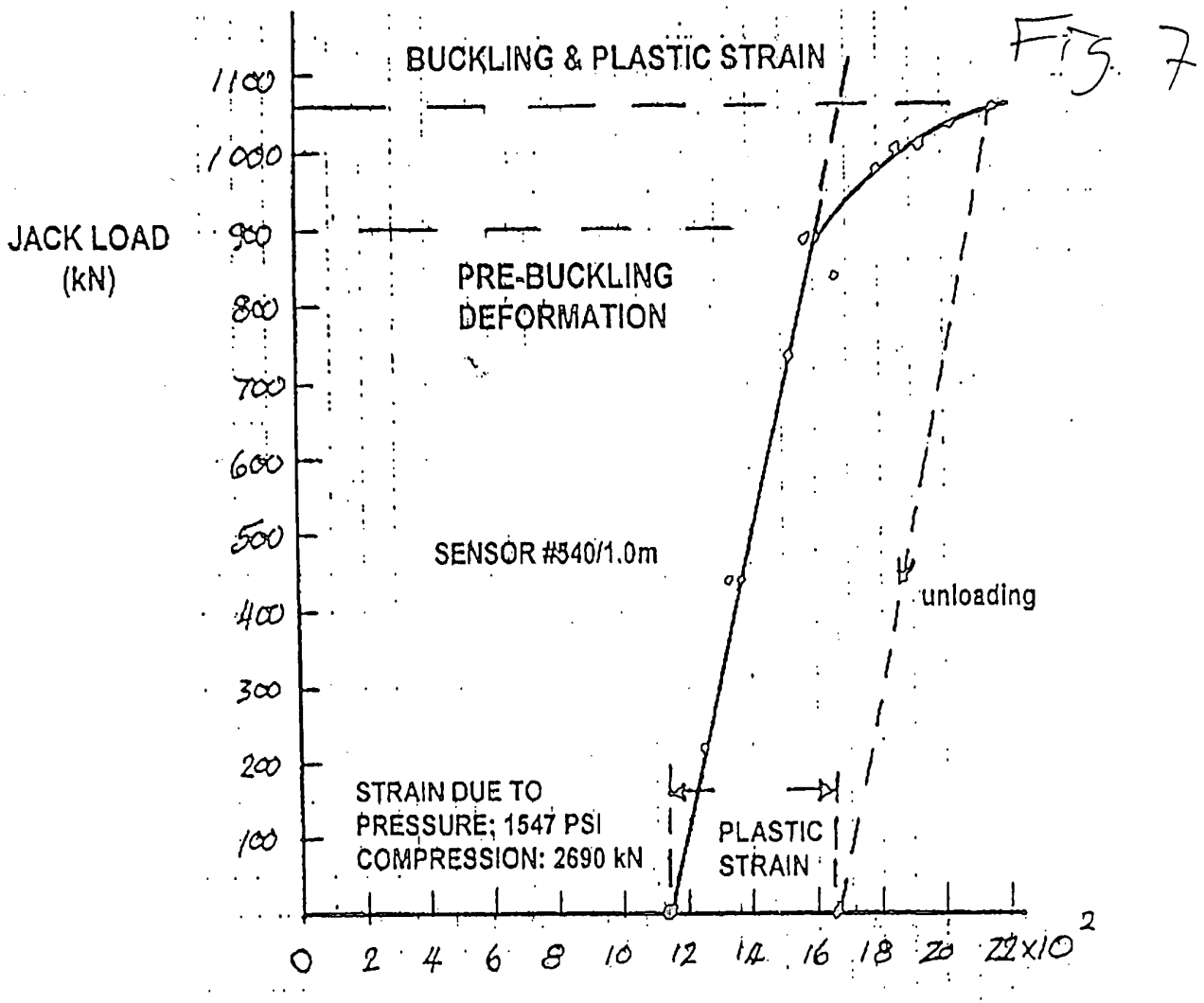


Fig. 7